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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,809	11/15/2001	Elizabeth A. Richard	COMP-0246 P01-3670	3825

7590 08/03/2004

Intellectual Property Administration
Legal Department, M/S 35
PO Box 272400
Ft. Collins, CO 80527-2400

EXAMINER

PERVEEN, REHANA

ART UNIT PAPER NUMBER

2116

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/002,809	Applicant(s) RICHARD ET AL.	
	Examiner Rehana Perveen	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-46 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-39 is/are allowed.
- 6) ☒ Claim(s) 40-43 and 46 is/are rejected.
- 7) ☒ Claim(s) 44 and 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Allowable Subject Matter

Claims 1-39 are allowed over the prior art of record based on the amendments to the independent claims 1, 8, 20, 34, and 37.

Claims 44 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 40-46 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 40-43, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al, Patent No. 6,356,972, in view of Quan et al, Publication No. 2002/0133658.

As to claim 40, Chin et al teach a queue entry pool comprising a plurality of fixed registers configured to store requests (figure 4, queues 66 or 68), and an entry shifter coupled to the queue entry pool (figure 4, In-Order queue 64) and comprising a plurality of registers, each of the registers is configured to store a request corresponding to a request stored in one of the plurality of fixed registers (col. 5 lines 35-65 and col. 11 line 9 – col. 12 line 67).

However, Chin et al do not expressly teach the entry shifter registers being shift registers. Quan et al teach a request queue having a plurality of shift registers to store requests (page 2, section 0036). It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Chin et al and Quan et al because Quan et al's usage of well known shift registers would have enabled entry shifting in a more efficient manner utilizing the advantages and benefits already well known in the prior existing systems.

As to claim 41, Chin et al teach the queue entry pool is configured to store read requests (col. 13 lines 14-29).

As to claim 42, Chin et al teach each of the plurality of fixed registers is configured to store a plurality of flags corresponding to the status of each request (col. 11 lines 9-62).

As to claim 43, Chin et al teach each of the plurality of fixed registers is configured to store each of a valid entry flag, an entry ready flag, and a retire entry flag for the corresponding request (inherent, col. 11 lines 9-62).

As to claim 46, Chin et al teach a queue structure depth checker coupled to the queue entry pool and configured to track the number of requests stored in the queue (comparator, col. 5 line 46 – col. 6 line 7).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rehana Perveen whose telephone number is 703-305-8476. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on 703-308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2116

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Rehana Perveen', with a stylized, cursive script.

Rehana Perveen
Primary Patent Examiner
Technology Center 2100